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NOTES AND BRIEF ARTICLES

[Unsigned notes are by the editor]

Readers of MYCOLOGIA are invited to contribute to this department personal news items and notes or brief articles of interest to mycologists in general. Manuscript should be submitted before the middle of the month preceding the month in which this publication is issued.

Dr. C. D. Sherbakoff is now plant pathologist at the Tennessee Experiment Station.

The new officers of the Pacific Division of the Phytopathological Society are Dr. H. S. Reed, Dr. J. W. Hotson, and Dr. S. M. Zeller.

Mr. Stewart H. Burnham has removed his extensive collection of New York plants to Cornell University, where he will be permanently located.

Dr. Föëx, representing the pathologists of France, visited the Garden on September 8; and Dr. Brierly, representing those of England, spent October 8 with us and departed for Rothamsted October 9.

A memorial of the late Professor P. A. Saccardo has been prepared and distributed by Professor de Toni. Nearly half of the pamphlet of 36 pages is devoted to a list of Professor Saccardo's publications.

Professor Samuel M. Tracy died at Laurel, Mississippi, on September 5, at the age of 73. He was born at Hartford, Vermont, and educated at the Michigan Agricultural College. Several of his publications deal with the fungi, and he was associated with Professor Earle in studies of the fungous flora of the southern states.

Thomas F. Hunt, Dean of the College of Agriculture of the University of California, has accepted appointment as permanent delegate representing the United States at the International Institute of Agriculture, Rome, Italy. His wide knowledge of agricultural conditions in America, coupled with his extensive investigations in Europe, make him an exceptionally well-qualified man for this position, which has been vacant since the death of David Lubin.

Mr. Ramsbottom, general secretary of the British Mycological Society, with headquarters at the British Museum, has undertaken to compile a list of all the new genera of fungi published since the appearance of Vol. XXII of Saccardo's "Sylloge," the original diagnoses of which will appear in annual instalments in the Society's publications. He will welcome separates including descriptions of new genera or any other assistance that will make his work easier or more complete.

Dr. L. O. Overholts, of State College, Pennsylvania, arrived at the Garden, August 28, with several boxes of specimens to be studied and compared in the mycological herbarium. Among them were some specimens which we were very glad to see, including types of certain species recently described by Mr. C. G. Lloyd. Of these, *Polyporus induratus* C. G. Lloyd, collected at Urbana, Illinois, in 1918 by William McDougal, proves to be a rather thick form of *Fomes fraxineus*, which is more like the typical European specimens than most of those I have seen from America.

Grifola flavovirens was found in quantity at Yama Farms, on September 6, by several members of the Mycological Club who were out collecting fungi. It appeared in several fine clusters in a low, damp spot in oak-chestnut woods between the Inn and Jenny Brook. I have never before seen so much of this rare species in one place.

Under the title "Selecta Mycologica," in the *Annales Mycologici* for 1920, Bresadola describes 92 new species of fungi from various localities and appends a list of observations and synonyms prepared during his study of herbarium material borrowed from several European institutions.

Dr. W. H. Ballou brought to the Garden on August 30 and September 2, from White Plains, New York, a number of interesting fleshy and woody fungi which he had just collected—among them *Lactaria atroviridis*, *Lactaria Indigo*, several species of *Boletus*, a peculiar form of *Tyromyces caesius*, zygospores of *Sporodinia grandis*, and a resupinate polypore.

Pestalozzia scirrofaciens is described as new by Miss Nellie Brown in *Phytopathology* for August, 1920, as the cause of a hard tumor on the stems of the sapodilla tree in Florida. The disease can be controlled in an orchard by destroying the infected trees.

Mr. H. A. Lee, pathologist of the Bureau of Science, Manila, reports banana wilt in certain parts of the Philippine Islands. Fortunately, this disease, caused by *Fusarium cubense*, has not yet appeared upon *Musa textilis*, which yields the valuable Manila hemp of commerce.

A mosaic disease of corn in Porto Rico similar to that found on sugar-cane, is described and figured by Brandes in the *Journal of Agricultural Research* for August 16, 1920. The corn aphid is an active agent in disseminating this disease; and the only known method of control is the destruction of infected plants.

"The Ascomycetous Fungi of Human Excreta," by C. E. Fairman, issued July 30, 1920, is a small illustrated pamphlet containing historical matter, observations, a bibliography, a list of the 18 species previously known, and the description of a new species, *Cylindrocolla faecalis*, found by the author in September, 1917.

Dr. Fairman is a practising physician and became interested in these fungi because of the connection of some of them with human diseases.

Professor Bruce Fink wrote me, August 29, from Conway, Kentucky, where he spent the summer: "The woods are full of fleshy fungi, as we have had wet weather. On August 21, I picked up a strange fungus, which I suppose is a *Cyclomyces*. It was growing at the base of an old stump in the woods. I found one somewhat like it near here several years ago. The two are the only ones I have collected." A specimen sent for the Garden herbarium proved to be the rare *Cycloporus Greenei*, as Professor Fink suggested.

A bacterial canker of poplar, caused by *Micrococcus populi*, has become a veritable scourge in the valley of the Oise and neighboring valleys of France. It attacks the stem and branches of seedlings and the trunks of older trees. Treatments are preventive only, and include selection of stock and locality, destruction of all insects feeding on the poplar, and destruction of all diseased trees or parts of such trees.

Professor Buller has published in the *Transactions of the British Mycological Society* for September, 1920, an interesting account of the way in which the red squirrel of North America collects mushrooms and stores them up in late autumn for winter use. They are either hidden away in quantity in holes in tree trunks, in crows' nests, etc., or placed in the forks of branches, where they dry quickly and may be used when desired.

A circular on Potato Wart distributed by the U. S. Department of Agriculture in October, 1920, reviews what was previously known regarding this very serious disease and adds information recently obtained by observation and experiment. A general discussion of the subject by Lyman is followed by special discussions of susceptible varieties and new hosts contributed by Kunkel.

The disease has been found on several varieties of tomatoes. The actual damage to this new host is slight, but the fungus is kept alive and spread to new fields by this means.

The Tropical Research Laboratory of the United Fruit Company, which was formerly located at Zent, Costa Rica, and closed during the period of the war, is being reopened at Changuinola, Panama. Dr. John R. Johnston, professor of plant pathology in the University of Havana, has been appointed director of tropical research for the company with headquarters in Havana, and two pathologists will be located at the Laboratory in Panama, one to continue work on the banana disease, and the other to work on the diseases of the coconut, cacao, and other crops.

Referring to *Pucciniastrum arcticum* (Lagh.) Tranz. the statement has recently been made that "Outside of Alaska only two American collections are known." (Bull. Torr. Bot. Club 47: 468) [Oct., 1920]. This statement needs amplifying. There are in the herbarium of the University of Wisconsin specimens representing 30 collections from upwards of 20 localities in Wisconsin ranging from the north to within about 40 miles of the southern boundary. All of these are on *Rubus triflorus* (*R. pubescens*) and all of the specimens on this species of *Rubus* are of the *arcticum* type while all of those on *Rubus strigosus* are of the *americanum* type. This raised a query as to whether the cause of the difference lay in the parasites or in the hosts.

J. J. DAVIS

"Collar-rot of Apple Trees in the Yakima Valley," by J. W. Hotson, is an important contribution to this subject published in *Phytopathology* for November, 1920. The author believes that the only essential condition of collar-rot is a permanent wound of the bark at the collar of the tree; which may be caused by *Bacillus amylovorus*, *Armillaria mellea*, *Polystictus versicolor*, gophers, frost, plowing, gradual corrosion by oxidation, etc. Where the injury is severe, the tree should be removed; in other

cases, cut out the diseased tissue, disinfect the wound with lysol and leave it exposed to the air. Bridge grafting has been tried on valuable trees, but can not be recommended as a general practice, since trees so treated are rarely thrifty.

In Bulletin 222 of the Connecticut Agricultural Experiment Station, Dr. Clinton gives an account, with illustrations, of new and unusual plant injuries and diseases found in Connecticut, 1916-1919. Under Dry Rot, on page 398, he describes a house at Westbrook, which was attacked by *Merulius lacrymans* and seriously damaged because of insufficient air drainage about the woodwork. Among the remedial measures suggested were: The removal and burning of all infected wood and rubbish; the creosoting, if possible, of the new wood used; and the building of several sunken areaways, protected only by wire netting, to allow free access of air under the house. According to Dr. Clinton, the dry-rot fungus depends in great measure for its development upon a fairly small and tightly closed air space next the wood, and a sufficient amount of water to keep the air therein constantly saturated or at least above the normal amount.

The results of experimental work and observations on the citrus canker by Peltier and Frederick are published in the *Journal of Agricultural Research* for July 15, 1920. The following statements are quoted from the summary:

The successful inoculation of a large number of wild relatives in the greenhouse shows that *Pseudomonas citri* has a wide range of hosts and is not limited to the genus *Citrus*.

So far as the menace of citrus-canker to the citrus industry of the United States is concerned, with the exception of *Poncirus trifoliata*, none of the wild relatives, native or introduced, now growing in the citrus districts are susceptible enough to have any bearing on the eradication program.

Leaf texture is apparently an important factor in influencing resistance to *Pseudomonas citri* by its host plants. This phase deserves further investigation.

An exceedingly important discussion of sugar-cane root disease by Earle and Matz appeared in the *Journal of the Department of Agriculture of Porto Rico* for January, 1920. A summary of the situation in Porto Rico is given by Earle, as follows:

Root disease as here understood is a complex including phases often known as Root Rot, Wither Tip, Top Rot and Rind Disease. These phenomena are caused by a number of facultative parasites, none of which attack actively growing vigorous tissues. There is also a heretofore unknown true parasite inhabiting the vascular bundles. *Rhizoctonia* and *Pythium* are the usual root-killing agents rather than *Marasmius* and *Himantia*.

Cane varieties differ greatly in their resistance or susceptibility to Root Disease. The Otaheite or Cana Blanca is very susceptible. North Indian canes like Kavangire and those with part North Indian parentage are very resistant or practically immune.

Remedial or preventive measures include

- A. The planting of resistant varieties.
- B. Better cultural methods to overcome facultative parasites.
- C. Proper seed selection and handling.

The parasite inhabiting the vascular bundles is described by Matz as *Plasmodiophora vascularum*. It is said to differ from *P. brassicae* in having larger spores, in not forming galls, and in inhabiting the vascular system of its host, plugging up the conducting vessels and greatly interfering with their action.

A NEW BOLETE FROM PORTO RICO

Gyroporus Earlei sp. nov.

Pileus broadly convex, solitary, 8–10 cm. broad; surface slightly viscid when young, becoming dry at maturity, subglabrous, fulvous; margin thin, concolorous; context fleshy, firm, yellowish-white, unchanging, taste mild, but slightly mawkish; tubes sinuate-depressed, minute, ochraceous at maturity, not stuffed when young; spores ovoid to ellipsoid. smooth, honey-yellow under the microscope, with a very large nucleus, $7-8 \times 4-5 \mu$; stipe somewhat enlarged above and below, bright-yellow at the apex, otherwise very dark brown, almost black, glabrous, solid, firm, 5 cm. long, 1.5–2 cm. thick.

Type collected in sandy land beside a ditch in an old grapefruit grove,—where the trees were dying from root disease,—near Manati, Porto Rico, October 29, 1920, *F. S. Earle*. The description is largely drawn from field-notes accompanying the collec-

tion. Boletes are exceedingly rare in tropical regions. This is probably the first specimen of the group that has been found in Porto Rico; and it is interesting to note that it belongs to the small genus having pale, ellipsoid spores.

W. A. MURRILL.

Tree Surgery is the subject of Farmers' Bulletin 1173, by J. Franklin Collins, published in September, 1920. This bulletin is intended primarily as a guide for those who desire to take care of their own trees or to superintend such work. It outlines some of the better methods of treating injuries, removing dead or diseased limbs, and repairing decayed spots in the trunk or limbs.

A badly diseased or injured tree should be removed and replaced by a healthy one unless there is some very special reason for trying to preserve the tree. This applies particularly to an old tree that has been in poor condition or in poor soil for some years. Such a tree rarely recovers completely from the shock of extensive or elaborate repair work on the trunk; in fact, it often deteriorates more rapidly thereafter. Two axioms of tree-repair work (tree surgery) that should be borne in mind constantly are (1) that prompt treatment of freshly made wounds is the surest and most economical method of preventing disease or decay in the future and (2) that all wounds made in tree-surgery work should be cleaned, sterilized, and protected from infection just as thoroughly as in the case of animal surgery and for exactly the same reasons.

At present tree-repair work has not received the recognition and approval from tree owners that it deserves. This may be due at times to unfavorable experiences with dishonest and ignorant tree surgeons, at other times to the reluctance of the owners to spend much money in preserving their trees, or from their ignorance of the benefits that may result when tree-repair work is properly done. Reliable tree surgeons are doing much in a practical way to educate the public as to the benefits of tree-repair work. Unfortunately, the unscientific or dishonest work of some others still is doing much to offset it.